Liver transplantation for hepatocellular carcinoma with allografts from donors after circulatory death: Is the tumor recurrence

LETTER TO THE EDITORS

Liver Transplantation for Hepatocellular Carcinoma with Allografts from Donors after Circulatory Death: Is the Tumor Recurrence Genuinely Increased?

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TO THE EDITORS:

We read with interest the article entitled "Inferior Survival in Liver Transplant Recipients With Hepatocellular Carcinoma Receiving Donation After Cardiac Death Liver Allografts" by Croome et al.,[1] which was published in the November 2013 issue of *Liver Transplantation*.

The authors analyzed results from the North American Scientific Registry of Transplant Recipients database (collected between January 1995 and October 2011) and observed inferior outcomes for recipients with hepatocellular carcinoma (HCC) who received donation after circulatory death (DCD) grafts. Croome et al.[1] hypothesized that more severe ischemia/reperfusion injury to DCD grafts might promote HCC growth and increase HCC relapse rates. Because the outcomes of the HCC-DCD patient group were inferior to those of the other patient groups, the authors concluded that this was related to HCC recurrence.

The major flaw of the study, however, is that the data about tumor recurrence were not collected in the Scientific Registry of Transplant Recipients database.

In our opinion and in contrast to the authors' conclusion, we believe that the presented data suggest that HCC recurrence is not affected by the liver graft type. The Kaplan-Meier survival estimates provided in Fig. 1 show an early posttransplant mortality rate for HCC-DCD recipients as high as 15%, and the remaining deaths occurred within the first 6 months after transplantation. This pattern is likely to be related to inferior graft quality and its related posttransplant complications.[2]

HCC-related deaths generally occur beyond 12 months.[3] In the present study, during further follow-up, the survival curves for the non-HCC–DCD group, the HCC–donation after brain death (DBD) group, and the HCC-DCD group are parallel, and this is confirmed by data in Table 3. The differences between the 1- and 5-year survival rates are basically the same for the HCC-DBD and HCC-DCD groups (20.5% and 20.1%, respectively) despite the significantly higher alpha-fetoprotein levels in the HCC-DCD group (alpha-fetoprotein level > 400 ng/mL: 12% versus 6%, $P = 0.006$).

Patients undergoing transplantation for HCC have well-preserved liver function and are frequently matched with extended criteria grafts. The interaction between HCC and DCD grafts described by the authors probably reflects this practice rather than different HCC behavior in these livers.

In conclusion, the present study confirms higher rates of early posttransplant mortality for DCD graft recipients with HCC. However, we believe that the data do not prove an increased incidence of HCC recurrence, and in this respect, the authors' conclusion should be taken with caution.

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